

CLAIMS

I claim:

- 1 1. A method for controlling fans comprising:
2 arranging a combination of thermal sensors;
3 coupling the combination of thermal sensors to a thermal data channel of a
4 controller; and
5 controlling cooling devices in accordance with the thermal data channel.
- 1 2. The method of claim 1, wherein arranging comprises placing the
2 thermal sensors in proximity to electrical devices.
- 1 3. The method of claim 2, wherein the electrical devices are processors.
- 1 4. The method of claim 1, wherein the thermal sensors are coupled in
2 parallel.
- 1 5. The method of claim 4, wherein the thermal sensors are constructed to
2 respond uniformly to changes in temperature.
- 1 6. The method of claim 1, wherein the thermal sensors are diodes.
- 1 7. The method of claim 1, wherein the thermal sensors are transistors.
- 1 8. The method of claim 1, further comprising installing the controller and
2 the combination of thermal sensors in an electronic enclosure.
- 1 9. An electronic assembly comprising:
2 means for housing a plurality of active integrated circuit devices; and
3 means for controlling cooling devices proximal to select integrated circuit
4 devices, wherein said means for controlling cooling devices is coupled to a
5 combination of a first thermal sensing means and a second thermal sensing means.

1 10. The electronic assembly of claim 9, wherein said means for controlling
2 cooling devices uses a single thermal data channel to sense thermal information
3 provided by the first and second thermal sensing means.

1 11. The electronic assembly of claim 9, wherein said means for controlling
2 cooling devices drives a first cooling device located proximal to a first processor and
3 a second cooling device located proximal to a second processor.

1 12. The electronic assembly of claim 11, wherein said means for
2 controlling cooling devices drives the first and second fans in response to the warmest
3 of the first processor and the second processor.

1 13. The electronic assembly of claim 9, wherein the combination of the
2 first thermal sensing means and the second thermal sensing means is arranged in
3 parallel.

1 14. An apparatus comprising:
2 a first device fan located proximal to a first select electrical device;
3 a second device fan located proximal to a second select electrical device;
4 a combination of a first thermal sensor and a second thermal sensor, wherein
5 the first thermal sensor is located proximal to the first select electrical device and the
6 second thermal sensor is located proximal to the second select electrical device; and
7 a fan controller having a first thermal data channel coupled to the combination
8 of the first and second thermal sensors.

1 15. The apparatus of claim 14, wherein the fan controller senses the
2 warmer of the first select electrical device and the second select electrical device and
3 drives both the first device fan and the second device fan in accordance with a
4 thermal operating profile for the first and second select electrical devices.

1 16. The apparatus of claim 15, wherein the first select electrical device
2 and the second select electrical device comprise integrated circuits.

1 17. The apparatus of claim 14, wherein the first and second thermal
2 sensors respond uniformly to changes in temperature.

1 18. The apparatus of claim 14, wherein the first and second thermal
2 sensors are diodes.

1 19. The apparatus of claim 14, wherein the first and second thermal
2 sensors are transistors.

1 20. The apparatus of claim 14, wherein the first device fan and the second
2 device fan are substantially similar.

1 21. The apparatus of claim 14, further comprising:
2 an enclosure having an enclosure fan and a third thermal sensor coupled to a
3 second thermal data channel of the fan controller.

1 22. The apparatus of claim 21, wherein the fan controller senses
2 temperature using the third thermal sensor and the second thermal data channel and
3 drives the enclosure fan in accordance with a thermal operating profile for the
4 enclosure.